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10/699,728	11/03/2003	Dana D. Jacobsen	100203797-1	3519

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HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER	
TORRES, JOSE	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/699,728	JACOBSEN, DANA D.	
	Examiner	Art Unit	
	Jose M. Torres	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 March 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Comments

1. The Amendment filed on March 29, 2007 has been entered and made of record.

Specification

2. The disclosure is objected to because of the following informalities:

- Page 3 line 2: "printing device 740" should be -- printing device 100 --

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 3, 9-11, 22, 26 are rejected under 35 U.S.C. 102(e) as being anticipated by So et al. (US 6,832,004).

Re claim 1: So et al. disclose a method for image compression (Col. 1 lines 8-10), comprising: tracking a pool of pixel predictors (FIG. 1, "predictors **12*a*-*e***"),

each pixel predictor having a value ("ranks", Col. 6 lines 24-32 and Col. 7 lines 41-56); selecting a subset of pixel predictors from the pool (FIG. 1, "predictor determination circuit **13**', Col. 7 lines 5-36); updating the value of only those pixel predictors of the subset with each pixel processed (FIG. 1, "rank updating circuit **15**', Col. 7 lines 41-56); and rebalancing the pixel predictor subset to locally adapt to image conditions (The predictors are based on the pixel values neighboring the target pixel, therefore it is automatically adjusted to the conditions of the images. FIG. 5, Col. 8 lines 35-44).

Re claim 3: So et al. disclose the pool of pixel predictors are tracked in two dimensions (FIG. 4, Col. 8 lines 35-44).

Re claim 9: So et al. disclose incrementing a hit counter associated with each pixel predictor in the pool of pixel predictors when a match (Tolerance comparison) between a pixel predictor and processed pixel is found (Col. 7 lines 5-56).

Re claim 10: So et al. disclose the subset of possible pixel predictors is selected based on incremented hit counters (The selection of the predictor is based on the ranks. Col. 7 lines 41-56).

Re claim 11: So et al. disclose using a pixel predictor from the selected subset having a highest incremented hit counter value as the first pixel predictor used for pixel predictions (The most frequently selected predictor has the highest rank. Col. 7 lines 41-56).

Re claims 22 and 26: So et al. disclose a method/computer-readable medium of image compression (Col. 1 lines 8-10), comprising: assigning a hit counter ("ranks") to each of a number of pixel predictor values (Col. 6 lines 24-32 and Col. 7 lines 41-56); tracking matches between pixel predictor values and processed pixels in two dimensions (FIG. 1, "predictor determination circuit **13**", Col. 7 lines 5-36); updating one pixel predictor value to the last unmatched pixel value (Col. 7 lines 5-36); incrementing the hit counter based on tracked prediction matches (FIG. 1, "rank updating circuit **15**", Col. 7 lines 41-56); and rebalancing the hit counters to locally adapt to image conditions (As stated in claim 1, the hit counters also depends on the most applied prediction technique, therefore it is also dependant on the image conditions. Col. 7 lines 41-56 and Col. 8 lines 35-44).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

> invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 2, 4-6, 25 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over So et al. in view of Clouthier et al. (US 2003/0184809). The teachings of So et al. have been discussed above.

As to claim 2, So et al. does not explicitly disclose encoding verbatim a pixel being processed as an unmatched pixel value if no match is found between the pixel predictor subset and the pixel being processed.

Clouthier et al. teaches encoding verbatim a pixel being processed as an unmatched pixel value if no match is found between the pixel predictor subset and the pixel being processed (The compressor code the byte as is, if no match is found between the comparison of the byte with the previous options. Paragraphs [0062]-[0064]).

Therefore, in view of Clouthier et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify So et al.'s method by incorporating the method step of performing a verbatim coding, as taught by Clouthier et al., when no match is found for the current byte and the predictors tested in order to provide a fast compression pipeline because the pixel being compared is being compared 8 bits at a time, and when no match is found this pixel is encoded as is and the cache value is replaced with this value (Paragraphs [0023] and [0062]).

As to claims 4 and 5, So et al. further teaches the pixel locations include a NE, a NEE, a NW, a N, a NWW, a W, and a WW pixel location expressed geographically relative to a pixel being processed (FIG. 4, "R_{5-11}", Col. 8 lines 35-44).

However, So et al. does not explicitly disclose the pool of pixel predictors include pixel locations, including the location of the last unmatched pixel.

Clouthier et al. teaches the pool of pixel predictors include pixel locations, including the location of the last unmatched pixel (Paragraphs [0040]-[0043]).

Therefore, in view of Clouthier et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify So et al.'s method by incorporating the pixel locations including the location of the last unmatched pixel, as taught by Clouthier et al., in order to provide a fast compression pipeline that has the ability to enable the decompression of data with specific location of identical data (Paragraphs [0035]-[0036]).

As to claim 6, So et al. further teaches the pool of pixel predictors includes a black pixel, a white pixel and a most common value pixel (The mean value greater or less than the average of the group represent the black and white pixel value and the most common value is the approximation most used. Col. 6 line 45 through Col. 7 line 4 and lines 41-56).

However, So et al. does not explicitly disclose the pool of pixel predictors includes a last unmatched pixel and a cache pixel.

Clouthier et al. teaches the pool of pixel predictors includes a last unmatched pixel and a cache pixel (Paragraph [0059] and [0062]).

Therefore, in view of Clouthier et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify So et al.'s method by incorporating the last unmatched and cache pixel, as taught by Clouthier et al., to the pool of pixel predictors in order to increment the number of options to predictive code the pixel being processed.

As to claims 25 and 29, So et al. does not explicitly disclose specifying a number of bit limits for encoding an indicator of a run command; encoding a literal command; encoding a prediction of a next pixel; encoding a seedrow count; and encoding a replacement count.

Clouthier et al. teaches specifying a number of bit limits for encoding an indicator of a run command ; encoding a literal command; encoding a prediction of a next pixel; encoding a seedrow count; and encoding a replacement count .

Therefore, in view of Clouthier et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify So et al.'s method by incorporating the method steps of specifying a number of bit limits for encoding an indicator of a run command; encoding a literal command, a prediction of a next pixel a seedrow count and a replacement count, as taught by Clouthier et al., in order to

7. Claims 7, 8, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over So et al. in view of Weinberger et al. ('The LOCO-I Lossless Image Compression Algorithm: Principles and Standardization into JPEG-LS', IEEE Transactions on Image Processing, Vol. 9, No. 8, Aug 2000, pp. 1309-1324). The teachings of So et al. have been discussed above.

As to claims 7 and 8, So et al. does not explicitly disclose the pool of pixel predictors tracked include continuous tone prediction algorithms that are selected form the group of LOCO, MED, LINEAR4, LINEAR5 and GAP.

Weinberger et al. teaches the pool of pixel predictors tracked include continuous tone prediction algorithms that are selected form the group of LOCO, MED, LINEAR4, LINEAR5 and GAP (III. Detailed Description of JPEG-LS, Section A. Prediction, page 1312).

Therefore, in view of Weinberger et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify So et al.'s method by incorporating the LOCO continuous tone prediction algorithm, as taught by Weinberger, in order to attain compression ratios similar or superior to those obtained with state-of-the-art schemes (Abstract, page 1309).

As to claims 12 and 13, So et al. further teaches rebalancing the selected subset after a set prediction interval.

However, So et al. does not explicitly disclose periodically rebalancing the hit counters when a first pixel predictor value in the subset reaches a specified limit.

Weinberger et al. further teaches periodically rebalancing the hit counters when a first pixel predictor value in the subset reaches a specified limit (III. Detailed Description of JPEG-LS, Section D. Resets, pages 1316-1317).

Therefore, in view of Weinberger et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify So et al.'s method by incorporating the method step of rebalancing the hit counters when a first pixel predictor value in the subset reaches a specified limit, as taught by Weinberger et al., in order to give more weight to immediate past than to remote past (III. Detailed Description of JPEG-LS, Section D. Resets, pages 1316-1317).

8. Claims 14, 15, 18, 21, 23, 24, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over So et al. in view of Hoel (US 6,741,368).

As to claims 14, 21, 23, 24, 27 and 28, So et al. teaches a method of image compression, comprising: assigning a hit counter to each of a number of pixels predictors (FIG. 1, "predictors **12*a-e***"), each pixel predictor having one of the pixel prediction values ("ranks", Col. 6 lines 24-32 and Col. 7 lines 41-56); tracking matches between pixel predictor values and a number of processed pixels in two dimensions (FIG. 1, "predictor determination circuit **13**", FIG. 4, Col. 7 lines 5-36 and Col. 8 lines 35-44); incrementing the hit counters based on tracked prediction matches (FIG. 1, "rank updating circuit **15**", Col. 7 lines 41-56); and selecting a number of pixel predictors having the highest hit counters for future pixel predictions (The selection of the predictor is based on the ranks. Col. 7 lines 41-56).

However, So et al. does not explicitly disclose communicating a number of pixel prediction values via a variable length code compression algorithm; and encoding verbatim a pixel being processed as an unmatched pixel value if no match is found.

Hoel teaches communicating a number of pixel prediction values via a variable length code compression algorithm Col. 12 lines 18-26); and encoding verbatim a pixel being processed as an unmatched pixel value if no match is found (Col. 11 lines 21-26).

Therefore, in view of Hoel, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify So et al.'s method by incorporating the method steps of communicating a number of pixel prediction values via a variable length code compression algorithm, and encoding verbatim a pixel being processed as an unmatched pixel value if no match is found, as taught by Hoel, in order to provide a reduced memory space requirement method (Col. 5 lines 1-23)

As to claim 15, So et al. further teaches storing the incremented hit counters in a bit packing mechanism; and storing a number of run counts and replacement counts as variable length code (The rank/run length is coded using a Huffman coder, and its content includes the replacement counts as well as the run counts. Col. 7 line 57 through Col. 8 line 13).

As to claim 18, So et al. does not explicitly disclose each pixel predictor includes a pixel predictor location that is unary coded.

Hoel further teaches each pixel predictor includes a pixel predictor location that is unary coded (Col. 12 lines 18-26).

9. Claims 16, 17 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over So et al. in view of Hoel as applied to claim 15 above, and further in view of Clouthier et al. The teachings of So et al. modified by Hoel have been discussed above.

As to claims 16 and 17, So et al. modified by Hoel fails to teach a single bit is encoded to indicate a run/literal command.

Clouthier et al. further teaches a single bit is encoded to indicate a run/literal command (The data structure shown in FIG. 3, uses a bit to encode a run/literal command on data field **308**, when binary data is being compressed. Paragraphs [0035] and [0039]).

Therefore, in view of Clouthier et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify So et al. and Hoel by incorporating the coding, as taught by Clouthier et al., using a single bit to indicate a run/literal command in order to provide a method which is applicable to different type of data (binary, bi-level, 8-bit, Paragraph [0023]).

As to claim 31, So et al. modified by Hoel does not explicitly disclose a set of computer executable instructions executed by the processor to encode an unmatched pixel value verbatim and update one pixel predictor value to the unmatched pixel value.

Clouthier et al. further teaches a set of computer executable instructions executed by the processor to encode an unmatched pixel value verbatim and update one pixel predictor value to the unmatched pixel value (The value of the cached pixel is updated for the unmatched pixel. Paragraph [0062]).

Therefore, in view of Clouthier et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify So et al. and Hoel by incorporating the instructions, as taught by Clouthier et al., of encode verbatim a pixel with no match and update a predictor value (Cache) to the value of the unmatched pixel in order to provide a fast compression pipeline because the pixel being compared is being compared 8 bits at a time (Paragraphs [0023] and [0062]).

10. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over So et al. in view of Hoel as applied to claim 15 above, and further in view of Weinberger et al. The teachings of So et al. modified by Hoel have been discussed above.

As to claims 19 and 20, So et al. modified by Hoel fails to teach each run/replacement count is encoded as variable length Gamma Golomb code.

Weinberger et al. teaches each run/replacement count is encoded as variable length Gamma Golomb code (II. Modeling Principles and LOCO-I, Section B. Applications to LOCO-I, *Coder*, page 1311).

Therefore, in view of Weinberger et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify So et al. and

Hoel by incorporating the Golomb-type coding, as taught by Weinberger et al., for the run/replacement counts in order to attain compression ratios similar or superior to those obtained with state-of-the-art schemes (Abstract, page 1309).

11. Claims 30, and 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoel in view of So et al.

As to claims 30 and 34, Hoel teaches an imaging forming system (FIG. 2, "printer device **16**"), comprising: a processor (FIG. 2, "digital processor **26**"); a memory (FIG. 2, "RAM **28**"); a media marking mechanism (FIG. 2, "print engine **34**"); interface electronics coupling the processor, the memory, and the media marking mechanism (The processor also compress the image data as stated in Col. 7 line 56 through Col. 8 line 7. FIG. 2, "bus **27** and line **31**", Col. 7 lines 41-47 and Col. 8 lines 22-37).

However, Hoel does not explicitly disclose a set of computer executable instructions/logic on the device stored on the memory and executed by the processor to: track a pool of pixel predictors, each pixel predictor having a value, select a subset of pixel predictors from the pool, update the value of only those pixel predictors of the subset with each pixel processed, and rebalance the pixel predictor subset to locally adapt to image conditions.

So et al. teaches a set of computer executable instructions/logic on the device stored on the memory and executed by the processor to: track a pool of pixel predictors (FIG. 1, "predictors **12*a*-*e***"), each pixel predictor having a value ("ranks", Col. 6 lines 24-32 and Col. 7 lines 41-56), select a subset of pixel predictors from the pool (FIG. 1,

'predictor determination circuit **13**', Col. 7 lines 5-36), update the value of only those pixel predictors of the subset with each pixel processed (FIG. 1, "rank updating circuit **15**', Col. 7 lines 41-56), and rebalance the pixel predictor subset to locally adapt to image conditions (The predictors are based on the pixel values neighboring the target pixel, therefore it is automatically adjusted to the conditions of the images. FIG. 5, Col. 8 lines 35-44).

Therefore, in view of So et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hoels system by incorporating the instructions to track a pool of pixel predictors, each pixel predictor having a value, select a subset of pixel predictors from the pool, update the value of only those pixel predictors of the subset with each pixel processed, and rebalance the pixel predictor subset to locally adapt to image conditions, as taught by So et al., in order to provide a system which compresses image data using the prediction errors from previously encoded data, as well as the run length as a rule for compressing (Col. 5 lines 6-19).

As to claim 32 as understood, Hoel further teaches the means for receiving the image data includes an I/O connection to send and receive image data (FIG. 2, "I/O interface **32**').

As to claim 33 as understood, Hoel does not explicitly disclose the means for image file compression/decompression includes a set of computer executable

instructions for two-dimensional compression/decompression with dynamic pixel predictor rebalancing.

So et al. further teaches the means for image file compression/decompression includes a set of computer executable instructions for two-dimensional compression/decompression with dynamic pixel predictor rebalancing (Col. 6 lines 24-32 and Col. 7 lines 5-36 and line 41 through Col. 8 line 13).

As to claim 35, Hoel does not explicitly disclose the device includes a number of hit counters, each associated with a different pixel predictor, the hit counters operable to be incremented when a match between a pixel predictor and processed pixel is found.

So et al. further teaches the device includes a number of hit counters, each associated with a different pixel predictor, the hit counters operable to be incremented when a match between a pixel predictor and processed pixel is found (The rank value indicates the number of times a specific predictor is used and updated periodically. Col. 7 lines 5-36 and lines 41-56).

12. Claims 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoel in view of So et al. as applied to claim 35 above, and further in view of Weinberger et al. The teachings of Hoel modified by So et al. have been discussed above.

As to claims 36 and 37, Hoel modified by So et al. fails to teach at least one hit counter can be periodically reset and each hit counter has a total and wherein the total can be reset by dividing the total by a power of two.

Weinberger et al. teaches at least one hit counter can be periodically reset and each hit counter has a total and wherein the total can be reset by dividing the total by a power of two (III. Detailed Description of JPEG-LS, Section D. Resets, pages 1316-1317).

Therefore, in view of Weinberger et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Hoel and So et al. by incorporating the hit counter, as taught by Weinberger et al., and periodically resetting each counter by dividing the total by a power of two in order to give immediate past larger weight than the remote past (III. Detailed Description of JPEG-LS, Section D. Resets, pages 1316-1317).

As to claim 38, Hoel modified by So et al. fails to teach the number of pixel predictors are selected from the group including a number of set of pixel values and a number of compression algorithms.

Weinberger et al. further teaches the number of pixel predictors are selected from the group including a number of set of pixel values and a number of compression algorithms (III. Detailed Description of JPEG-LS, Section A. Prediction, page 1312).

Therefore, in view of Weinberger et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Hoel and So et al. by incorporating the compression algorithms, as taught by Weinberger et al., in order to attain compression ratios similar or superior to those obtained with state-of-the-art schemes (Abstract, page 1309).

Response to Arguments

Objections to the Specification

13. With respect to the objection to page 3, the replacement language suggested in the Office Action mailed on January 17, 2007 should have been--printing device 100-- instead of "printing device 100". Therefore, the previous objection is removed, but an objection is made based on the correction.

With respect to the objection to page 4, Applicant has amended line 32 to recite "Figure 2A" to correct the typographical error. Therefore, the objection is removed.

With respect to the antecedent basis objection under 37 C.F.R. § 1.75, Applicant's arguments have been fully considered and are persuasive. Examiner recognizes that the claim limitation "a media marking mechanism" finds proper antecedent basis on page 3 of the originally filed Specification. Therefore, the objection is removed.

Claim Objections

14. With respect to the claim objections, Applicant has amended claim 22 line 3 and claim 26 line 4 to recite "tracking matches" to correct sentence grammar. Therefore, the objections have been removed.

Claim Rejections under 35 U.S.C. § 101

15. With respect to the claim rejection under 35 U.S.C. § 101, Applicant has properly amended claims 30 and 31 to recite statutory subject matter, as required by 35 U.S.C. § 101. Therefore, the rejection is removed.

Claim rejections under 35 U.S.C. § 112

16. With respect to the claim rejections under 35 U.S.C. § 112

Claim Rejections under 35 U.S.C. § 102

17. Applicant's arguments with respect to claims 1-6, 9-11, 22, 25, 26 and 29 have been considered but are moot in view of the new ground(s) of rejection. The new grounds of rejection, which corresponds to So et al. (US 6,832,004) US Patent of prior reference (US 2001/0024524) does indeed teaches the limitations of amended claim 1. Applicant alleges in page 12 of the Amendment that the So reference dose not describe tracking a pool of pixel predictors, selecting a subset of pixel predictors from the pool, and updating the value of only those pixel predictors of the subset with each pixel processed.

Examiner respectfully disagrees since the predictors described in the So reference track a pool of pixel predictors (FIG. 1, "predictors **12*a*-*e***"), select a subset of pixel predictors from the pool (Those predictors which falls within the tolerance), and updates the value of only those pixel predictors of the subset with each pixel processed (The rank updating circuit updates the value of the "rank" which is determined by the

predictors used for the pixel being processed. See Col. 7 line 5 through Col. 8 line 44) Therefore, the limitations as claimed are anticipated by So et al.

With respect to claims 22 and 26, Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

With respect to claim 29, Applicant alleges that claim 29 is an independent claim. However, upon consideration the claim has always been presented in dependant format (Dependant upon claim 26), and has been treated as such. Therefore, Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections under 35 U.S.C. § 103

18. Applicant's arguments with respect to claims 7, 8, 12-21, 23, 24, 27, 28 and 30-38 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cornelissen disclose Methods of and Systems for Compression and Decompression That Prevent Local Data Expansion, Wood et al. disclose a Method for Encoding Digital Information, Trelewicz disclose a Raster Data Compression Apparatus and Method, and Wood et al. disclose Compound Document Page Data Compression.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jose M. Torres whose telephone number is 571-270-1356. The examiner can normally be reached on Monday thru Friday: 8:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on 571-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMT
06/25/2007

JINGGE WU
SUPERVISORY PATENT EXAMINER